

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method of erasing repeated patterns in a dark/light image obtained by image pickup of a subject of inspection, when identifying defects present in a repeated pattern in the subject of inspection, comprising:

detecting a reference pixel in the obtained image;

assigning a comparison pixel at a predetermined distance from the reference pixel, the distance being determined in accordance with the pattern pitch of the repeated patterns in the dark/light image;

obtaining a plurality of density differences between said reference pixel and each of said comparison pixels, wherein when a density of the reference pixel is larger than a density of the comparison pixel, a density difference is positive, and when the density of the reference pixel is smaller than the density of the comparison pixel, the density difference is negative;

determining a the density difference that is closest to 0 as a specific density difference;
and

applying said specific density difference to a reference density of the image, thereby erasing the repeated patterns in the dark/light image to identify defects in a pattern-erased image.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Previously presented) The method of erasing repeated patterns in a dark/light image according to Claim 1, wherein, in the step of determining the specific density difference, a mean value of the plurality of density differences between the reference pixel and the comparison pixels is determined as the specific density difference.

6. (Canceled)

7. (Currently amended) A pattern defect inspection device comprising:
an image pickup element that picks up an image of a subject of inspection;
a processing device that detects pattern defects by storing and processing dark/light image data obtained by image pickup of the inspection subject, wherein the processing device detects a reference pixel in the obtained image, assigns a comparison pixel at a predetermined distance from the reference pixel, the distance being determined in accordance with the pattern pitch of the repeated patterns in the dark/light image, and obtains a plurality of density differences between said reference pixel and each of said comparison pixels, wherein when a density of the reference pixel is larger than a density of the comparison pixel, a density difference is positive, and when the density of the reference pixel is smaller than the density of the comparison pixel, the density difference is negative;

a unit for determining a density difference that is closest to 0 as a specific density difference; and

a unit for applying the specific density difference to a reference density of the image and generating a pattern-erased image to identify defects in the pattern-erased image.

8. (Canceled)

9. (Canceled)

10. (Previously presented) The pattern defect inspection device according to claim 7, wherein, instead of determining the density difference that is closest to 0 as the specific density difference, a mean value of the plurality of density differences between the reference pixel and the comparison pixels is determined as the specific density difference.

11. (Previously presented) The pattern defect inspection device according to claim 1, wherein the distance between the comparison pixel and the reference pixel is an integral multiple of the pattern pitch of the repeated patterns.

12. (Previously presented) The method of erasing repeated patterns in a dark/light

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image according to claim 1, wherein the distance between the comparison pixel and the reference pixel is an integral multiple of the pattern pitch of the repeated patterns.